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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,883	10/29/2001	Phillip A. Danner	120751	1812
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JOHN S. BEULICK C/O ARMSTRONG TEASDALE, LLP ONE METROPOLITAN SQUARE SUITE 2600 ST LOUIS, MO 63102-2740			EXAMINER JONES, PRENELL P	
			ART UNIT 2616	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/682,883

Applicant(s)

DANNER ET AL.

Examiner

Prenell P. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-4, 7, 12 and 14 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8-11, 13, 15, 16 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Response to Arguments

1. Applicant's arguments with respect to claims 1-16 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 1, 5, 8, 11, 12, 15, 16 and 18 are objected to because of the following informalities:

3. Regarding claims 1, 5, 8, 11, 12, 15, 16 and 18, Applicant is claiming in lines 3-5 w/r to claim 1; and line 2 w/r to claim 5; and line 3-4 w/r to claim 8; and line 7 w/r to claim 11; and lines 6-8 w/r to claim 12; and line 2 w/r to claim 15 and line 2 w/r to claim 16; and lines 4-5 w/r to claim 18 "to be operable," which makes the limitations following it to be optional, which renders the meads and bounds of the claim to be indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1, 3, 4, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siemens (Non-Patent Literature) in view of Glas et al (US PG PUB 20030055900) and Schneider Electric (Non-Patent Literature).

Regarding claims 1, 4, and 12, Siemens (Non-Patent Literature) discloses an Industrial Ethernet with Switching and Fast Ethernet technology operating in a fiber optic ring/wired speed environment wherein it is possible to set up subnets and network segments (page 1-2 and 4), and the operating temperature is up to 60 degrees celcius (page 7). Although Siemens teaches an Industrial Ethernet switch operating with an operating temperature up to 60 degrees celcius, Siemens is silent on operating at a temperature range of 0 degrees to 60 degrees celcius, and operating at a humidity of 10% to 95%, and whereby VLANs are utilized and supported in the temperature environment.

In a communication system that utilizes Ethernet switching, Glas et al (US PG PUB 20030055900) discloses utilizing Ethernet switching that includes a plurality of subscribers via a plurality of connected ports, wherein subnets, such as VLANs are utilized, and spanning tree algorithm is applied to virtual switches (Abstract, paragraph 0003, 0004, 0008-0010, 0018, 0021, 0067, 0071, 0131), and Schneider Electric disclose Ethernet cabling system for an a Fast Ethernet Industrial Ethernet Hub switch (Industrial Ethernet switch), whereby the architecture includes multiple ports, wherein the operating temperature is 0 degrees celcius to 60 degrees

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celcius, and operating in a non-condensing humidity range of 10% to 95 (page 6). Although Siemens, Glas and Schneider are silent on the Ethernet switch transferring data between a plurality of devices. It is inherent or the function of the switch to transfer data between networks (plurality devices).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement utilizing VLANs in an Industrial Ethernet switching environment wherein the operating temperature is between 0 and 60 degrees celcius and the non-condensing humidity is 10% to 95% as taught by the combined teachings of Glas and Schneider for the purpose of further expanding and enhancing system performance through switching, wherein the switching is performed in a rugged or harsh environment (non-office environment).

Regarding claim 3 and 14, as indicated above, Siemens discloses an Industrial Ethernet with Switching and Fast Ethernet technology operating in a fiber optic ring/wired speed environment wherein it is possible to set up subnets and network segments, and the operating temperature is up to 60 degrees celcius, Glas discloses utilizing Ethernet switching that includes a plurality of subscribers via a plurality of connected ports, wherein subnets, such as VLANs are utilized, and Schneider disclose Ethernet cabling system for an a Fast Ethernet Industrial Ethernet Hub, whereby the architecture includes multiple ports, wherein the operating temperature is 0 degrees celcius to 60 degrees celcius, and operating in a non-condensing humidity range of 10% to 95. Although Siemens and Schneider are silent on utilizing gigabyte speed in association with Ethernet switch transferring data between a plurality of devices, Glas further discloses utilizing Gigabyte Ethernet specifications (paragraph 0021)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement utilizing Gigabyte Ethernet specification in an Industrial Ethernet switching environment as taught by Glas with the teachings of Siemens and Schneider for the purpose of further expanding and enhancing system performance through switching, wherein the switching is performed in a rugged or harsh environment (non-office environment).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siemens (Non-Patent Literature) in view of Glas et al (US PGPUB 20030055900) and Schneider Electric (Non-Patent Literature) as applied to claim 1 above, and further in view of Gally et al (US Pat 6,980,547).

Regarding claim 2, as indicated above, Siemens discloses an Industrial Ethernet with Switching and Fast Ethernet technology operating in a fiber optic ring/wired speed environment wherein it is possible to set up subnets and network segments, and the operating temperature is up to 60 degrees celcius, Glas discloses utilizing Ethernet switching that includes a plurality of subscribers via a plurality of connected ports, wherein subnets, such as VLANs are utilized, and Schneider disclose Ethernet cabling system for an a Fast Ethernet Industrial Ethernet Hub, whereby the architecture includes multiple ports, wherein the operating temperature is 0 degrees celcius to 60 degrees celcius, and operating in a non-condensing humidity range of 10% to 95. Although Siemens and Schneider are silent on utilizing gigabyte speed in association with Ethernet switch transferring data between a plurality of devices, Glas further discloses utilizing Gigabyte Ethernet specifications (paragraph 0021)

However, Siemens, Glas and Schneider Electric are silent on stackable Ethernet switches. In the architecture of a distributed switching system, Gally et al (US Pat 6,980,547)

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discloses an environment wherein Ethernet switches are stackable (col. 2, line 60 thru col. 3, line 10, col. 8, line 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement stackable switches as taught by Gally with the combined teachings of Siemens, Glas and Schneider Electric for the purpose of managing utilization of operational area and minimizing a congested operational area and allow ease in adding ports as the network expands.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siemens (Non-Patent Literature) in view of Glas et al (US PG PUB 20030055900) and Schneider Electric (Non-Patent Literature) as applied to claim 1 above, and further in view of Hirschmann (Non-Patent Literature).

Regarding claim 7, as indicated above, Siemens discloses an Industrial Ethernet with Switching and Fast Ethernet technology operating in a fiber optic ring/wired speed environment wherein it is possible to set up subnets and network segments, and the operating temperature is up to 60 degrees celcius, Glas discloses utilizing Ethernet switching that includes a plurality of subscribers via a plurality of connected ports, wherein subnets, such as VLANs are utilized, and Schneider disclose Ethernet cabling system for an a Fast Ethernet Industrial Ethernet Hub, whereby the architecture includes multiple ports, wherein the operating temperature is 0 degrees celcius to 60 degrees celcius, and operating in a non-condensing humidity range of 10% to 95. Although Siemens, Glas and Schneider are silent on utilizing SNMP, in a press release from the Hirschmann press, Hirschmann discloses hub switches that utilizes SNMP functionality (page 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement SNMP functionality with the combined teachings of Siemens, Glas and Schneider Electric for the purpose of further managing the provision of services in an Ethernet Hub switch environment.

Allowable Subject Matter

1. Claim 11 is allowed over prior art.
7. Claims 5, 6, 8-10, 13, 15, 16 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Although the cited prior art discloses a networking system that implements inter-networking and whose architecture includes a switching network wherein the Ethernet switch has a plurality of ports and coupled to a plurality of hubs or concentrators which are coupled to end-stations, Ethernet switch accommodates high-end VLAN applications and switch includes a plurality of plug-in modules, utilization of flexible industrial and educational computer system that includes desktop environment, WLANs are utilized, WLANs devices such as, Ethernet utilize portions of the radio spectrum, utilization of IRWLAN, accommodating Ethernet ports or radio ports and virtual private networks are proprietary, use of virtual networks for providing adequate security for users, Ethernet devices, WLAN/Ethernet technical details reveal temperature range of 0 to 60 °C, and Ethernet switch that supports high-end features, such as VLAN protocol, RMON, QoS, SNMP and Spanning tree and a storage environment whereby the humidity is 10% to 95% non-condensing and switch operating at one gigabit they fail to teach or suggest with respect to claims 5, 6, 8, 11, 15, 16 and 18, extended vibration of at least 2g and shock vibration of at

least 4 g, with regard to claim 13, a second switch operationally coupled to a first switch, wherein first switch and second switch are configured to cooperatively operate as one switch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

April 18, 2007


CHI PHAM
SUPERVISORY PATENT EXAMINER

4/27/07